## IN THE UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF TEXAS MARSHALL DIVISION

JOSHUA HARMAN, ON BEHALF OF THE \$ UNITED STATES OF AMERICA, \$ Relator, \$ \$ V. \$ CIVIL ACTION NO. 2:12-CV-0089 \$ TRINITY INDUSTRIES, INC. AND \$ TRINITY HIGHWAY PRODUCTS, LLC, \$ Defendants. \$

## **DECLARATION OF ROGER P. BLIGH**

- 1. My name is Roger P. Bligh. I am of sound mind and capable of making this Declaration. I am an adult over the age of twenty-one. I am professional engineer employed by Texas A&M University and its member, Texas A&M Transportation Institute, (collectively, "Texas A&M") in the above-captioned action. I make this Declaration in support of Texas A&M's Response to Plaintiff's Emergency Motion for Sanctions Against TTI. I swear that every statement made in this Declaration is made on my personal knowledge or is based upon my knowledge, and is true and correct.
- 2. On Monday, October 6, 2014, Texas A&M produced supplemental documents to counsel for Relator Joshua Harman regarding Texas A&M's experimental, research and development testing. This production included a copy of Texas A&M's Microsoft Access "database" and related crash test files, nearly all of which deal with testing of guardrail components.
- 3. I have reviewed the Declaration of Brian A. Coon ("Coon Declaration"), executed on October 11, 2014. Dr. Coon opines that "TTI and Trinity were [pendulum] testing the 4-inch

ET-PLUS with a new anchor bracket in the 2003 tests to increase the capacity of the anchor bracket." Coon Declaration ¶ 4. *See also id.* ¶ 2 ("TTI performed at least four pendulum tests on a 'narrowed' 4-inch chute in 2003.").

- 4. The testing referenced in paragraphs 2 and 4 of the Coon Declaration involved pendulum testing of the posts and anchoring system of an experimental flared end terminal system. TTI's pendulum tests did not engage the extruder head in any way, nor did the tests involve any extrusion of rail. In summary, TTI's pendulum tests did not impact the extruder head, and the guide channels attached to the ET-Plus extruder head were not being tested.
- 5. I understand that Plaintiff's allegations in this case pertain to the ET-Plus extruder head guide channels, the testing of the ET-Plus System pursuant to NCHRP Report 350, and whether the ET-Plus extruder head (in particular) is compliant with the NCHRP Report 350 standards. Pendulum testing is not used for evaluating the ET-Plus System for NCHRP Report 350 compliance. Rather, pendulum testing is used to evaluate components that might (after extensive research and development) be used in a commercialized system.
- 6. The accelerometer and other data that Dr. Coon says was not provided to him *was* produced by TTI to Harman's counsel as: TTI-00040489, 40512, 40525, 40536, 40567, and 40596. *But see* Coon Declaration ¶ 3 (a) & (b)) ("None of this information has been provided by TTI or Defendants."). Dr. Coon is either mistaken, or his counsel failed to provide him with the full TTI production.
- 7. I understand that these same files have been designated by Plaintiff/Relator Joshua Harman as Supplemental Trial Exhibits P-1273, P-1274, P-1275, P-1276, P-1277, and P-1278, respectively.
- 8. The video referenced in paragraph 3 (c) and (d) of the Coon Declaration was produced by Texas A&M from archived video (converted from Betamax SP format) for the

220513-P1, P2 and P3 tests. TTI produced these videos to Harman's counsel, as soon as the media was converted and reviewed, on Wednesday, October 8, 2014. TTI could not locate videos for pendulum tests 220513-P4 through P6 after a diligent search.

- 9. The pendulum tests referenced in the Coon Declaration were testing the capabilities of an experimental flared anchoring system, and the tested posts and anchor system was designed to address the issues of a flared system during a re-directional impact *downstream* from the extruder head. In particular, an anchor cable and experimental cable anchor bracket were attached to the first post and the first section of rail, respectively. These components were not attached to the extruder head. The pendulum tests were simulating the forces affecting the cable and the bracket (not the head) when a guardrail system is impacted well downstream from the head, and the deflection of the guardrail by the vehicle impact creates tension in the rail that pulls on the cable and the bracket (not the ET-Plus head).
- Dr. Coon's arguments regarding the significance of this pendulum testing (see paragraph 4 of the Coon Declaration) are simply incorrect. The extruder head on the experimental flared end terminal system was not being tested. The pendulum tests involved pulling the guardrail to simulate a downstream impact on the guardrail beyond the extruder head. No guardrail was extruded, intended to be extruded, or could have been extruded, making it impossible for the referenced pendulum tests to in any way assess extrusion forces on the ET-Plus head on the experimental flared system. I disagree strongly with Relator/Plaintiff's statement that TTT's pendulum testing in series 220513-P was used to assess the possible use of a 4-inch guide channel, or anything related to the extrusion forces of guardrail passing through the ET-Plus head. See Motion at 7 & Coon Declaration ¶ 4.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Executed this <u>12</u><sup>th</sup> day of October 2014, in Rusk County, Texas.

Roger P. Bligh, Ph.D. P.E.